

# Telephones on Modern Passenger Vessels

## G.E.C. Equipment on S.S. *Stratheden*, S.S. *Strathallan* and M.V. *Dominion Monarch*.



Fig. 1.—S.S. *Stratheden*, 23 400 tons.

**N**O ocean-going passenger ship can to-day claim to be fully equipped for passenger convenience and smooth general administration unless she carry a comprehensive telephone system. That this is generally appreciated is shown by the equipment of vessels commissioned in recent times and of others now building, but any tendency to regard the extensive use of telephones aboard ship as a modern idea is counteracted by perusal of an article in *The National Telephone Journal* of March, 1907, *i.e.*, of over thirty-one years ago. After commenting on various Press reports of the exchanges designed for the *Lusitania* and *Mauretania* the writer says :—

*As a matter of fact the idea of aboard ship private branch telephone exchange, designed to give intercommunication between the various parts of the ship, and to make the local and long-distance service available from any of the telephones on the ship when the vessel is in port, is so new that when it was proposed to the Cunard Company it was not accepted with the prompt enthusiasm that might have been expected. It is quite true that for years past Swedish coasting steamers have carried a single telephone and have had it connected with the exchange when in port, so that the ship became temporarily a subscriber's station. It is also true that various Atlantic liners and one or two large American passenger vessels have been*

*fitted with internal telephone installations for giving communication between the passengers' cabins and the ship's offices and catering departments. But the National Telephone Company was the first to propose floating private branch exchanges to give a complete telephone service throughout the ship and making the ship installation a part of the general telephone system of the country whenever the ship is in port.*

*Now that the Cunard Company, in accordance with their record for enterprise, have broken the ice, it is to be hoped that other shipping companies will follow suit and give their officers and passengers the benefit of the service of the universal time-saver. The usefulness on the large passenger vessel of to-day of a complete telephone system, giving instant communication between all working departments of the ship and between the passengers' cabins and the stewards' departments, will demonstrate itself in a single voyage. The modern liner is a huge floating hotel and business establishment. The distances are great and the day's work extremely active. A complete telephone service will effect a saving of time and labour and an improvement in control of staff and in service rendered to the customer in the same way as it does in a similar establishment on shore. In similar establishments on shore the manager who has once had experience of branch exchange telephone service wonders how he ever got on without it. As for the shore communication, to be made available whenever the ships are in port, it should be immensely useful to the shipping companies themselves, as it will put the head offices in constant touch with the ships, and with any*

*part of them, until the moment of sailing, and in the course of a year it will be a great convenience to many passengers. In these high-pressure days when the use of the universal time-saver, the telephone, is daily becoming more universal, it will be a perfect god-send to many Atlantic passengers to have the shore telephone service available from their own cabins up to a few minutes before sailing and directly after arrival. Time will show how much this facility will be appreciated by the travelling public and to what extent passengers will avail themselves of it, but little exercise of the imagination is required to conjure up occasions on which it will be simply invaluable.*

*It was formerly a popular notion that most sea travellers went on board ship mainly for rest and change, and found comfort in the absence of all communication with the shore. Even managers of big shipping companies are still possessed by this idea, though the eagerness with which passengers scramble for old newspapers when the pilot comes on board after a passage of only a few days should have taught them better. Many shipping people at present scout the idea of complete telephone installations on board ship. They are unable to see the value of the service either from their own point of view, in improved working of the ship, or from that of the passengers, in improved communication with the world. That is simply because the idea is novel. But there is no reason why every big passenger vessel should not have its branch telephone exchange and become part of the shore telephone system, when in port, at every port at which it touches. Probably in a few years this will be current shipping*

*practice, and then the shipping people will say, as others have said before them, "How did we ever get on without it?"*

It is a coincidence that an article written to-day could be prefaced by a reference to the modern counterparts of the *Lusitania* and *Mauretania*, namely, the *Queen Mary* and her sister ship at present known as No. 552, as affording excellent examples of telephone systems afloat. The *Queen Mary's* system has already found a place in these pages and that of No. 552 will do so when fitting out is complete.

Apart from the foregoing, two principal points emerge from the extract, the first being that the writer could not envisage that the development of radio telephony would provide means of maintaining conversational contact between passengers and the world whilst actually at sea and not only when in port, and the second, that the extensive use of telephones did not become "current shipping practice" in the "few years" he suggested. Many factors, of course, contributed to the delay, but were it necessary, the same writer could to-day present an even stronger case. The same advantage of convenience in communication between passengers and staff remains and is made even more important because of the greater extent to which the travelling public has become used to similar facilities ashore, particularly in up-to-date hotels, and telephone intercommunication between staff becomes still more valuable as size of ship and personnel tend to increase. Added to these original advantages are the greater ease of use and complete reliability of modern apparatus, the shape and colour

obtainable in moulded telephones to make them assets to the decorative schemes of even the most ambitious suite, and, by no means the least important, the enormous improvement in telephone facilities of all countries to which ships may be linked by radio or shore lines.

S.S. *Stratheden* and S.S. *Strathallan*.

The latest notable vessels to be equipped with complete telephone systems are the S.S. *Stratheden* and S.S. *Strathallan*. These were built at Barrow-in-Furness by Messrs. Vickers-Armstrong Ltd. to the order of the P & O. Steam Navigation Company, the *Stratheden* leaving Tilbury on her maiden voyage to Australia on December 24th, 1937, and her sister ship sailing for the first time on the same route on March 18th, 1938.

A G.E.C. telephone switchboard, together with Gecophone instruments is installed on each vessel and since the two are practically identical the following description of the equipment on the *Stratheden* applies also to the *Strathallan*.

*Switchboard.*

The switchboard (Fig. 2) is of three positions and is equipped for 387 lines and four shore lines, its capacity providing for an ultimate maximum of 500 lines. It consists of two sections, and, with hinged gates at the rear for line and cord-circuit relays, is self-contained. Installation of the sections involved only their bolting together and fixing to the deck.

The thirty cord circuits incorporate transmission bridges of the usual relay and condenser type and, in fact, the general

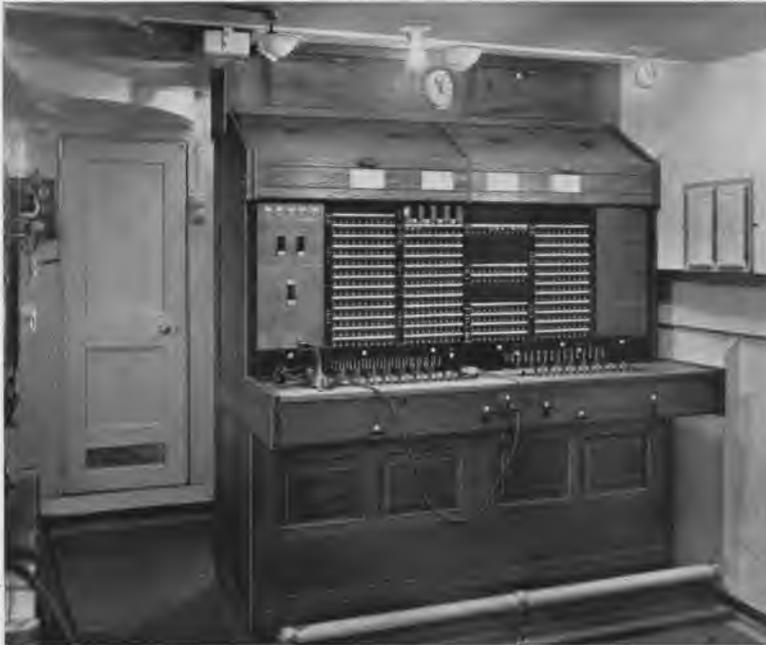


Fig. 2.—Telephone Switchboard.

operation and construction of the board conform to well-established practice, except where close study and considerable experience have shown that departures were necessary to ensure uninterrupted service under conditions met with at sea in both temperate and tropical regions.

The board is normally staffed by two operators but at times of heavy traffic five cord circuits may be switched from each regular position to an Assistant's position at the centre of the board. Alternatively, these ten central cord circuits may be used at times when the traffic necessitates only one operator at the switchboard.

The jack field is seen in Fig. 2 to occupy the four centre panels of the front equipment. The left-hand panel carries jacks that terminate lines to cabins on *D* deck and to stewards and pantries for that deck. Jacks on the next panel terminate similar

lines on *C* deck and also others to service clerks and a galley. At the top of this panel are keys, lamps and jacks associated with the shore lines. The lower rows of jacks on the third panel are allotted to cabins and stewards on *F* deck, the top row is allotted to service clerks and galley, and the two equipped rows in the centre terminate staff and miscellaneous lines. The right-hand panel has a layout similar to that on the left and serves *E* deck.

The extreme left-hand panel of the board carries a row of alarm lamps, the appropriate one of which glows should ringing fail or a fuse blow in either section or in either of two auxiliary cabinets. This visual alarm is accompanied by an audible alarm on a bell, which can be cut off, leaving the lamp still glowing, by operation of one of three keys mounted on this panel. A second key is operated to cause a bell to ring should a call mature during any period when full attention of the operator is not required at the board, and the third is operated to run the ringing machine continuously instead of its being started on operation of any of the ringing keys.

A dial mounting is fitted at the centre of the keyboard and in it may be plugged one of three dials. These are suitable for British, Australian and New Zealand telephone systems respectively, and the appropriate dial is plugged in when the ship is in port in order that the operators may obtain shore connexions for passengers.

### Telephones.

Gecophone sets, consisting of ivory mouldings, are fitted in the cabins (Figs. 3 and 4). The sets are of standard design except that buzzers replace the usual bells to give a calling signal that is subdued whilst still completely effective.

For stewards' use, telephones are fitted in small alcoves in corridors, calls to these sets being signalled by lamps on the wall in order that passengers in nearby cabins shall not be disturbed by the audible signals that would otherwise be necessary

### Operating Procedure.

When a passenger wishes to obtain service from the staff he informs the operator that he requires cabin service and may thereupon be connected to a service cabinet. This is installed in the switch-room and can be seen on the extreme left in Fig. 5. One of a possible total of three clerks in attendance at the cabinet answers



Fig. 4.—Two-berth cabin, first class.

the call by inserting a plug in the jack of the calling line from the switchboard. The passenger's requirements are taken and noted on a manifold pad. The subsequent withdrawal of the plug and replacement of the handset in the cabin results in a signal to the operator, who then clears the connexion. Should the volume of such traffic at any time be insufficient to justify the staffing of the cabinet, then the operators may assume the duties of the service clerks.

A copy of the order is despatched by messenger to the appropriate steward whilst the service clerk (or operator) telephones the particulars to the galley over a direct line from the panel (or switch-board). Thus no time is lost because while the steward is completing any duties already in hand and then proceeding to the



Fig. 3.—Single-berth cabin de luxe.



Fig. 5.—Service clerks' cabinet, stewards' line coupling cabinet and power plant.

galley or service lift, the order is receiving attention and will probably be ready for collection by the time the steward is in attendance. In this way expeditious handling of passengers' orders is obtained, the distance to be covered by stewards is reduced to a minimum, as also is intrusion on the privacy of passengers.

This use of the telephone system is its primary purpose but the other uses are no less important. Passenger comments have shown appreciation of the intercommunication between cabins and of the ease with which they may call not only the service staff but other of the personnel whose duty it is to attend to their needs. Shore

calls have already been mentioned and it must be remembered that the facility is useful not only to passengers who originate calls but also for calls incoming to the ship. Finally, staff intercommunication is a feature too obviously advantageous to need stressing.

In connexion with calls from passengers directly to stewards, as distinct from those regular service calls that are made to the service clerks, it should be noted that a coupling cabinet is provided to enable two or more stewards' telephones to be paralleled. This cabinet is installed in the switchroom and is seen in Fig. 5 with plug-ended cords inserted to link together two lines to stewards' telephones. The purpose of this coupling is to simplify the task of a steward who, should there be a time when the full staff is not on duty, may be required to serve over a larger area than usual. Calls to any telephone will be signalled on all that are paralleled together and the



Fig. 6.—Telephone in Cocktail Bar.



Fig. 7.—Lounge, first-class.



Fig. 8.—Vice-Regal Suite.



Fig. 9.—Library, first-class.

steward may answer from the nearest, or, conversely, may originate calls from any

#### *Berth Push Calls.*

In two-berth cabins where the telephone may not be readily accessible to the occupants when lying in bed, push-buttons are fitted near the heads of the berths. These may be used by passengers, the depression of either causing a relay in the cabin to operate and release in a continuous cycle that produces corresponding flashing of the line lamp at the switchboard. The flashing signal, being distinct from the usual steady glow, denotes to the operator that a push call has been made. Thereupon the appropriate steward is advised by telephone to proceed at once to the calling cabin. Upon arrival he depresses a reset key to stop the flashing call and to confirm to the operator that he



**Fig. 10.—Telephone in Pantry.**



**Fig. 11.—Public Call Box.**

is in attendance. The relay and key are mounted together in an ivory-coloured moulded case which is fitted near the cabin door

#### *Power Plant.*

The exchange draws current from a 24 volt battery of 85 ampere-hours. A second battery is charged from a motor-generator set and is switched on to the exchange power leads when the first battery is itself in need of charging. The control switchgear and generator-field regulator are mounted on a Sindanyo panel beneath which is fitted the battery-driven ringing dynamotor (Fig. 5). In an adjacent position on the deck in the switchroom is installed the motor-generator set, whilst the batteries are in an adjoining room.

### *M.V. Dominion Monarch.*

Even a telephone system devoid of special features would be of benefit to a ship's community but the wide degree of flexibility possible in the application of telephones and auxiliary services enables a system to be adopted to suit exactly the service policy of a shipping company and thus to give still greater benefits. In view of this, it is to be expected that of the telephone equipment for ships that The G.E.C. has in hand, all the systems vary to some extent from that on board the two P & O. vessels just described.

For example, in the system to be installed on the *M.V. Dominion Monarch*, a new vessel being built by Messrs. Swan, Hunter & Wigham Richardson to the order of Messrs. Shaw, Savill & Albion Co., a 440-line switchboard will be used in a system in which service calls will be handled by the operator or switched direct to a pantry during periods when the service clerks' cabinet is unattended. Again, the lamp signals on corridor phones will be repeated in deck pantries and stewardesses' day rooms to ensure prompt attention should stewards or stewardesses not be in a corridor when a call is made.

An additional feature is a small automatic exchange, of 30 lines capacity, to serve key members of the staff. This dual arrangement of manual working for service and automatic for staff has several advan-



Fig. 12.—*M.V. Dominion Monarch*, 27 000 tons.

tages because the needs of staff and passengers are not identical. The former know precisely to whom they wish to speak and become familiar with the numbers to be dialled. Passengers, on the other hand, often stand in need of the readily-accessible source of information which the operator represents, and appreciate the fact that their calls are completed for them.

From an operating point of view, a further advantage is given by the dual arrangement in that operators are relieved of a considerable number of staff inter-communication calls that might otherwise interfere with their handling of passengers' calls. To offset these advantages there is the rather more complex apparatus in an automatic exchange but that is far from meaning that an able and appropriate member of the crew will have any difficulty in mastering the circuit principles and maintaining the two exchanges in perfect condition.

